APPENDIX A

Proposed Counts

Proposed Count 1:

A method of separating and detecting tagged polynucleotides which comprises:

providing a plurality of polynucleotides, each tagged with a chromophore or fluorophore;

resolving to separate one of the plurality of tagged polynucleotides from the other tagged polynucleotides differing in length by a single nucleotide using an electrophoretic procedure capable of resolving tagged polynucleotides differing by a single nucleotide; and

detecting the resolved tagged polynucleotides by means of the chromophore or fluorophore;

or

A process for resolving or separating non-radioactively labeled nucleic acid fragments with a sequencing gel, comprising:

providing or generating detectable non-radioactively labeled nucleic acid fragments comprising one or more nucleotides that may be attached to, or coupled to, or incorporated into DNA or RNA, and wherein one or more fluorescent indicators are covalently attached, directly or through a linkage group, to the furanosyl moiety, the phosphate moiety, the base moiety of said nucleotides, or any combination thereof;

subjecting said labeled fragments to a sequencing gel to separate or resolve said fragments; and

detecting non-radioactively said separated or resolved fragments by means of said fluorescent indicators attached to said nucleotides.

Proposed Count 2

A method for detecting the sequence of a polynucleotide which comprises:

providing polynucleotide fragments generated by a polynucleotide sequencing technique, which are tagged with chromophores or fluorophores, wherein the fragments from one or more of the four sequencing reactions A, C, G or T are distinguishable from fragments of the other reaction by their spectral characteristics;

resolving the fragments by electrophoresis;

detecting the fragments as they are being resolved by means of the spectral characteristics of the chromophores or fluorophores, and thereby determining the polynucleotide sequence based on the polynucleotide fragments detected;

or

A process for determining the sequence of a nucleic acid of interest comprising:

providing at least one nucleic acid of interest;

generating detectable non-radioactively labeled nucleic acid fragments complementary to said nucleic acid of interest or a portion thereof, wherein said fragments have been labeled by incorporation of one or more nucleoside triphosphates comprising different fluorescent indicators;

subjecting said labeled fragments to a sequencing gel to separate or resolve said fragments; and

detecting said separated or resolved fragments by means of said different fluorescent indicators, to determine the sequence of said nucleic acid of interest.